

**SECTION 09650**  
**RESILIENT FLOORS**

**PART 1 - GENERAL**

**0.1 DESCRIPTION OF WORK**

- A.** Work Included: This Section specifies the following items:
1. Rubber floor tile.
  2. Vinyl composition tile.
  3. Resilient wall base and accessories.
  4. Resilient stair accessories.
  5. Substrate preparation for resilient flooring and accessories.

**0.2 SUBMITTALS**

- A.** Product Data: For each type of product indicated.
- B.** Samples for Verification: Full-size units of each color and pattern of resilient floor tile required.
1. Resilient Wall Base and Accessories: Manufacturer's standard-size Samples, but not less than 12 inches long, of each resilient product color and pattern required.
- C.** Maintenance Data: For resilient products to include in maintenance manuals.

**0.3 QUALITY ASSURANCE**

- A.** Fire-Test-Response Characteristics: Provide products identical to those tested for fire-exposure behavior per test method indicated. Tests to be performed by a testing and inspecting agency acceptable to authorities having jurisdiction.

**0.4 DELIVERY, STORAGE, AND HANDLING**

- A.** Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store tiles on flat surfaces.

## **0.5 PROJECT CONDITIONS**

- A.** Maintain temperatures within range recommended by manufacturer, but not less than 70 deg F or more than 95 deg F in spaces to receive floor tile during the following time periods:
  - 1. 48 hours before installation.
  - 2. During installation.
  - 3. 48 hours after installation.
- B.** After postinstallation period, maintain temperatures within range recommended by manufacturer, but not less than 55 deg F or more than 95 deg F.
- C.** Close spaces to traffic during floor covering installation.
- D.** Close spaces to traffic for 48 hours after floor covering installation.
- E.** Install resilient products after other finishing operations, including painting, have been completed.

## **PART 2 - PRODUCTS**

### **0.1 RUBBER FLOOR TILE**

- A.** Rubber Floor Tile: ASTM F 1344.
  - 1. Endura
  - 2. Johnsonite
  - 3. Mondo Rubber International, Inc.
  - 4. Nora Rubber Flooring, Freudenberg Building Systems, Inc.
- B.** Style and Colors: As selected by Engineer.
- C.** Thickness: 0.125 inch.
- D.** Size: 24 by 24 inches nominal.

### **0.2 VINYL COMPOSITION TILE**

- A.** Vinyl Composition Tile (VCT): ASTM F 1066.
  - 1. Armstrong World Industries, Inc.
  - 2. Azrock Commercial Flooring, DOMCO
  - 3. Congoleum Corporation
  - 4. Tarkett Inc.
- B.** Style and Colors: As selected by Engineer.

- C. Thickness: 0.125 inch
- D. Size: 12 by 12 inches.

### **0.3 RESILIENT WALL BASE**

- A. Wall Base: ASTM F 1861.
  - 1. Armstrong World Industries, Inc.
  - 2. Azrock Commercial Flooring, DOMCO
  - 3. Burke Mercer Flooring Products
  - 4. Johnsonite
  - 5. Marley Flexco (USA), Inc.
  - 6. Nora Rubber Flooring, Freudenberg Building Systems, Inc.
  - 7. Roppe Corporation
- B. Style and Colors: As selected by Engineer.
- C. Type (Material Requirement): TS (rubber, vulcanized thermoset) or TP (rubber, thermoplastic).
- D. Shape: Straight (toeless) at carpet and coved at resilient flooring.
- E. Minimum Thickness: 0.125 inch.
- F. Height: 4 inches.
- G. Lengths: Cut lengths 48 inches long or coils in manufacturer's standard length].
- H. Outside Corners: Premolded.
- I. Inside Corners: Premolded.
- J. Surface: Smooth.

### **0.4 RESILIENT STAIR ACCESSORIES**

- A. Treads and Risers: FS RR-T-650.
  - 1. Burke Mercer Flooring Products
  - 2. Endura
  - 3. Johnsonite
  - 4. Mondo Rubber International, Inc.
  - 5. Nora Rubber Flooring, Freudenberg Building Systems, Inc.
  - 6. Roppe Corporation
- B. Style and Colors: As selected by Engineer.

- C. Material: Rubber, Composition A.
- D. Size: Lengths and depths to fit each stair tread in one piece.
- E. Stringers: Of same thickness as risers, height and length after cutting to fit risers and treads and to cover stair stringers; produced by same manufacturer as treads and recommended by manufacturer for installation with treads.

## **0.5 RESILIENT MOLDING ACCESSORY**

- A. Types Include the Following As Applicable: Cap for cove carpet, cap for cove resilient sheet floor covering, carpet edge for glue-down applications, nosing for carpet, nosing for resilient floor covering, reducer strip for resilient floor covering, joiner for tile and carpet
  - 1. Burke Mercer Flooring Products
  - 2. Johnsonite
  - 3. Marley Flexco (USA), Inc
  - 4. Roppe Corporation
- B. Material: Rubber.
- C. Profile and Dimensions: As indicated.

## **0.6 INSTALLATION MATERIALS**

- A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic cement based formulation provided or approved by resilient product manufacturer for applications indicated.
- B. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.
  - 1. Use adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
    - a. VCT and Asphalt Tile Adhesives: 50 g/L.
    - b. Cove Base Adhesives: 50 g/L.
    - c. Rubber Floor Adhesives: 60 g/L.
- C. Stair-Tread-Nose Filler: Two-part epoxy compound recommended by resilient tread manufacturer to fill nosing substrates that do not conform to tread contours.
- D. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edges of tiles, and in maximum available lengths to minimize running joints.

## **PART 3 - EXECUTION**

### **0.1 EXAMINATION**

- A.** Examine substrates, with Installer present, for compliance with requirements for installation tolerances, moisture content, and other conditions affecting performance.
  - 1. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
  - 2. Proceed with installation only after unsatisfactory conditions have been corrected.

### **0.2 PREPARATION**

- A.** Prepare substrates according to manufacturer's written recommendations to ensure adhesion of resilient products.
- B.** Concrete Substrates: Prepare according to ASTM F 710.
  - 1. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
  - 2. Alkalinity and Adhesion Testing: Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
  - 3. Moisture Testing:
    - a. Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
    - b. Perform tests recommended by manufacturer. Proceed with installation only after substrates pass testing.
- C.** Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by manufacturer. Do not use solvents.
- D.** Access Flooring Panels: Remove protective film of oil or other coating using method recommended by access flooring manufacturer.
- E.** Use trowelable leveling and patching compound to fill cracks, holes, and depressions in substrates.
- F.** Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.

1. Do not install resilient products until they are same temperature as space where they are to be installed.
- G.** Sweep and vacuum clean substrates to be covered by resilient products immediately before installation. After cleaning, examine substrates for moisture, alkaline salts, carbonation, and dust. Proceed with installation only after unsatisfactory conditions have been corrected.

### **0.3 TILE INSTALLATION**

- A.** Lay out tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
  1. Lay tiles in pattern indicated.
- B.** Match tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, chipped, or deformed tiles.
- C.** Scribe, cut, and fit tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, edgings, door frames, thresholds, and nosings.
- D.** Extend tiles into toe spaces, door reveals, closets, and similar openings.
- E.** Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent, nonstaining marking device.
- F.** Install tiles on covers for telephone and electrical ducts and similar items in finished floor areas. Maintain overall continuity of color and pattern with pieces of tile installed on covers. Tightly adhere tile edges to substrates that abut covers and to cover perimeters.
- G.** Adhere tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

### **0.4 RESILIENT WALL BASE INSTALLATION**

- A.** Apply wall base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.
- B.** Install wall base in lengths as long as practicable without gaps at seams and with tops of adjacent pieces aligned.

- C. Tightly adhere wall base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
- D. Do not stretch wall base during installation.
- E. On masonry surfaces or other similar irregular substrates, fill voids along top edge of wall base with manufacturer's recommended adhesive filler material.
- F. Premolded Corners: Install premolded corners before installing straight pieces.

## **0.5 RESILIENT ACCESSORY INSTALLATION**

- A. Resilient Stair Accessories:
  - 1. Use stair-tread-nose filler to fill nosing substrates that do not conform to tread contours.
  - 2. Tightly adhere to substrates throughout length of each piece.
  - 3. For treads installed as separate, equal-length units, install to produce a flush joint between units.
- B. Resilient Molding Accessories: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor coverings that would otherwise be exposed.

## **0.6 CLEANING AND PROTECTION**

- A. Perform the following operations immediately after completing resilient product installation:
  - 1. Remove adhesive and other blemishes from exposed surfaces.
  - 2. Sweep and vacuum surfaces thoroughly.
  - 3. Damp-mop surfaces to remove marks and soil.
    - a. Do not wash surfaces until after time period recommended by manufacturer.
- B. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period. Use protection methods recommended in writing by manufacturer.
  - 1. Apply protective floor polish to horizontal surfaces that are free from soil, visible adhesive, and surface blemishes if recommended in writing by manufacturer.
    - a. Coordinate selection of floor polish with the Authority's maintenance personnel.

2. Cover products installed on horizontal surfaces with undyed, untreated building paper until Substantial Completion.
3. Do not move heavy and sharp objects directly over surfaces. Place hardboard or plywood panels over flooring and under objects while they are being moved. Slide or roll objects over panels without moving panels.

## **PART 4 - MEASUREMENT AND PAYMENT**

### **0.1 MEASUREMENT**

- A. Resilient floors will be measured as per square foot complete in place, including all preparation, accessories and incidentals.

### **0.2 PAYMENT**

- A. Payment for resilient floors will be made at the Contract unit price for the quantities as specified above.

### **0.3 PAYMENT**

ITEM NO.	DESCRIPTION	UNIT
0965.000	RESILIENT FLOORING	SF

## **END OF SECTION**